REMARKS

Claims 1-41 were pending as of the action mailed on February 8, 2006.

Claims 1, 9, 24, 30, and 36 are being amended. No new matter has been added.

Reexamination and reconsideration of the action are requested in light of the foregoing amendments and the following remarks.

Section 102

Claims 1-41 were rejected as allegedly anticipated by U.S. Patent Application Publication No. 2004/0064481 ("Azami"). The applicant respectfully traverses the rejection.

Azami discloses a system for transmitting structured data by dividing it into fragment data and corresponding fragment configuration information. *See* ¶0062, ¶0065, ¶0067. The fragment configuration information is generated as the structured data is fragmented. *See* ¶0068. The fragment configuration information includes position information indicating where the highest node in the fragment should be positioned, an ID reference specifying a piece of fragment data, an element name for the highest node in the fragment, and an element type of the highest node in the fragment. *See* ¶0068. The fragment data and the corresponding fragment configuration information are used at a receiver to "reconfigure" the structured data. *See* ¶0063, ¶0065.

Claims 1, 24, 30, and 36. The Examiner rejected claims 1, 24, 30, and 36, stating that Azami discloses:

> *splitting an XML document into fragments according to rules stored in a configuration file (Abstract, and page 1, paragraph [0014] and page 4, paragraph [0062]: original structured data such as XML data is divided into a plurality of fragments);*

The applicant respectfully disagrees. What the cited paragraphs actually disclose is the following:

> *[Abstract] A plurality of fragment data and a plurality of fragment configuration information, created one for each fragment data, to concatenate the plurality of fragment data in a receiving side to generate structured data having a*

tree structure are received. Each piece of fragment configuration information includes reference information having identification information identifying corresponding fragment data from the plurality of fragment data and position information on the connection position of the corresponding fragment data in the generated structured data. The received fragment data is concatenated to generate structured data based on the position information and the reference information included in the received fragment configuration information.

[0014] To achieve the above objects, there is provided a structured data receiving apparatus receiving a plurality of fragment data and a plurality of fragment configuration information, created one for each fragment data, to concatenate the plurality of fragment data into structured data stored in a receiving side and having a tree structure, each piece of fragment configuration information including reference information having identification information identifying corresponding fragment data from the plurality of fragment data and position information on a connection position of the corresponding fragment data in the structured data, the structured data receiving apparatus comprising: receiving means for receiving the fragment data and the fragment configuration information and outputting them; fragment data storing means for storing the fragment data output from the receiving means; structured data storing means for storing the structured data; and structured data concatenating means for concatenating predetermined fragment data, read from the fragment data storing means, into the structured data read from the structured data storing means, based on the position information and the reference information included in the fragment configuration information output from the receiving means.

[0062] In one embodiment of a content data and metadata transmission/reception system according to the present invention, original structured data (for example, MPEG-7 metadata or XML data whose format is defined using XML schemas) is divided into a plurality of fragments or a plurality of fragment data to be concatenated as structured data are created. At the same time, for each fragment data, fragment configuration information is created which includes position information specifying the position of the fragment data in the original structured data (or in the structured data to be generated by concatenating fragments) and reference information specifying the fragment data. The reference information included in this fragment configuration information is reference information on the fragment data that includes at least information on the position of the fragment data. The reference information may also describe information on the contents of fragment data so that a user or an application can process the fragment data based on that information.

The cited paragraphs disclose reassembling fragmented data using fragment configuration information. The paragraphs do not, however, disclose splitting an XML document into fragments according to rules, as recited in claim 1.

In rejecting claims 1, 24, 30, and 36, the Examiner further states that Azami discloses:

> *binding each of the fragments to an object in a content management system (page 5, paragraph [0067]: an ID (object) uniquely attached to each fragment); and*

The applicant respectfully disagrees. What the cited paragraph actually discloses is the following:

> *[0067] FIG. 4 is a diagram showing the outline of metadata fragmentation processing in this embodiment. Metadata (structured data) is divided into a plurality of fragment data and, at the same time, an ID uniquely identifying fragment data is attached to each fragment data. In addition, fragment configuration information corresponding to each fragment data is created. Instead of generating fragment data by dividing metadata, fragment data may be created considering metadata that will be generated through concatenation.*

The cited paragraph discloses dividing structured data into fragment data and attaching an ID to each piece of fragment data. There is no disclosure of what the claim element actually recites – binding fragments to an object in a content management system. In fact, there is not even the faintest suggestion of a content management system, which is known to those of ordinary skill in the art to be a system for organizing and facilitating the storage or creation of documents or other content. *See, e.g., en.wikipedia.org/wiki/Content_management_system.*

The applicant submits that nothing in the foregoing passage supports the rejection of claims 1, 24, 30, and 36.

Finally, the Examiner has failed to comply with Rule 104 in making this rejection. "The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified." 37 C.F.R. § 1.104(c). In the present case, the Examiner has failed at least to identify where in the reference the Examiner has found the "rules" and the "content management system". "It is important for an examiner to properly communicate the basis for a rejection so that the issues can be identified early and the applicant can be given fair opportunity to reply."

MPEP § 706.02(j). As the rejection stands, the applicant can only guess where in Azami the Examiner has found the recited features of the claims.

For the foregoing reasons, the applicant submits that claims 1, 24, 30, and 36 are allowable and that the rejection should be withdrawn.

Claims 3, 26, 32, and 38. The Examiner rejected claims 3, 26, 32, and 38, stating that Azami discloses:

> *associating the content with a particular object in the content management system (page 5, paragraph [0068]).*

The applicant respectfully disagrees. What the cited paragraph actually discloses is the following:

> *[0068] FIG. 5 is a diagram showing the structure of fragment configuration information in this embodiment. The fragment configuration information is composed of position information and reference information. The position information is composed of XPath and 'position'. They are used to specify a position at which the highest node of fragment data is to be positioned in the structured data that will be generated in the receiving side. The reference information is composed of an ID reference, an element name, and an element type. The ID reference specifies fragment data using an ID attached to the fragment data. The element name describes the XML element name of the highest node of the fragment data. The element type describes the element type name in the XML schema of the highest node of the fragment data.*

The cited paragraph fails to disclose associating content with an object in a content management system. For at least this reason, the applicant submits that claims 3, 26, 32, and 38 are allowable and that the rejection should be withdrawn.

Claim 9. The Examiner rejected claim 9, stating that Azami discloses:

> *the rules include configuration rules (page 5, paragraphs [0068]-[0074]).*

The applicant respectfully disagrees. What the cited paragraphs actually disclose is the following:

> *[0068] FIG. 5 is a diagram showing the structure of fragment configuration information in this embodiment. The fragment configuration*

information is composed of position information and reference information. The position information is composed of XPath and 'position'. They are used to specify a position at which the highest node of fragment data is to be positioned in the structured data that will be generated in the receiving side. The reference information is composed of an ID reference, an element name, and an element type. The ID reference specifies fragment data using an ID attached to the fragment data. The element name describes the XML element name of the highest node of the fragment data. The element type describes the element type name in the XML schema of the highest node of the fragment data.

[0069] Next, how to specify a position using XPath and 'position', which from position information, will be described. XPath specifies a specific node in the structured data, which will be generated in the receiving side, using the XML path language (XPath). 'position' takes one of two values as its value, "prevSibling" or "lastChild". When the 'position' value is "prevSibling", the node specified by the position information becomes the previous sibling node of the node specified by XPath. When the 'position' value is "lastchild", the node specified by the position information becomes the last child node of the node specified by XPath.

[0070] Next, how to specify position information will be described in detail using examples.

[0071] FIG. 6 shows an example of how to specify position information specifying the first child node of a node. To create the highest node 'd' of fragment data as the first child node of the node 'a' in the structured data, XPath specifies the node 'b' that is currently the first child node of the node 'a' with the value of 'position' set to "prevSibling". Then, the highest node 'd' of the fragment data is positioned as the previous sibling node of the node 'b', that is, as the first child node of the node 'a'.

[0072] FIG. 7 is an example of how to specify position information specifying a child node other than the first and the last child nodes of a node. To position the highest node 'd' of fragment data as a child node other than the first and last child nodes of the node 'a' in the structured data, XPath specifies the child node 'c' of the node 'a' with the value of 'position' set to "prevSibling". Then, the highest node 'd' of the fragment data is positioned as the previous sibling node of the node 'c', that is, as a child node of the node 'a'.

[0073] FIG. 8 is an example of how to specify position information specifying the last child node of a node. To create the highest node 'd' of fragment data as the last child node of the node 'a' in the structured data, XPath specifies

the node 'a' with the value of 'position' set to "lastChild". Then, the highest node 'd' of the fragment data is positioned as the last child node of the node 'a'.

[0074] FIG. 9 shows an example of how to specify position information specifying a child node of a node that has no child node. To create the highest node 'd' of fragment data as a child node of the node 'b' in the structured data, XPath specifies the node 'b' with the value of 'position' set to "lastChild". Then, the highest node 'd' of the fragment data is positioned as a child node of the node 'b'.

The cited paragraphs disclose how to specify position information for nodes, where the position information is used when the nodes are reassembled. The paragraphs do not, however, disclose that rules according to which an XML document is split into fragments include configuration rules. For at least this reason, the applicant submits that claim 9 is allowable and that the rejection should be withdrawn.

Claim 15. The Examiner rejected claim 15, stating that Azami discloses:

the sub-rules include a pattern rule that extracts textual content from a fragment (page 5, paragraph [0065]).

The applicant respectfully disagrees. What the cited paragraph actually discloses is the following:

[0065] The transmitter 1 creates content data and metadata about the content data. The content data is transmitted to the receiver 3 via broadcasting. The metadata is divided into a plurality of fragment data and, at the same time, fragment configuration information corresponding to each fragment data is created. The fragment data and the fragment configuration information are arranged, one after another, to create a metadata stream, and the created metadata stream is transmitted to the receiver 3 via broadcasting. The receiver 3 receives the content data and the metadata stream via broadcasting, extracts fragment data and fragment configuration information from the metadata stream, and reconfigures the metadata from the fragment data and the fragment configuration information. The reconfigured metadata is used for searching for content data or for viewing.

The cited paragraph discloses extracting fragment data and fragment configuration information from a metadata stream, but does not disclose a pattern rule that extracts textual

content from a fragment. For at least this reason, the applicant submits that claim 15 is allowable and that the rejection should be withdrawn.

Claim 16. The Examiner rejected claim 16, stating that Azami discloses:

> *the sub-rules include an attribute rule that assigns each object with an attribute type (page 5, paragraph [0068]).*

The applicant respectfully disagrees. What the cited paragraph actually discloses is the following:

> *[0068] FIG. 5 is a diagram showing the structure of fragment configuration information in this embodiment. The fragment configuration information is composed of position information and reference information. The position information is composed of XPath and 'position'. They are used to specify a position at which the highest node of fragment data is to be positioned in the structured data that will be generated in the receiving side. The reference information is composed of an ID reference, an element name, and an element type. The ID reference specifies fragment data using an ID attached to the fragment data. The element name describes the XML element name of the highest node of the fragment data. The element type describes the element type name in the XML schema of the highest node of the fragment data.*

The cited paragraph does not disclose an attribute rule that assigns an object with an attribute type. For at least this reason, the applicant submits that claim 16 is allowable and that the rejection should be withdrawn.

Claim 17. The Examiner rejected claim 17, stating that Azami discloses:

> *the attribute type includes logical object (LOIO) or physical object (PHIO) (page 5, paragraph [0068] and page 7, paragraph [0096]).*

The applicant respectfully disagrees. What the cited paragraphs actually disclose is the following:

> *[0068] FIG. 5 is a diagram showing the structure of fragment configuration information in this embodiment. The fragment configuration information is composed of position information and reference information. The position information is composed of XPath and 'position'. They are used to specify a position at which the highest node of fragment data is to be positioned in the*

structured data that will be generated in the receiving side. The reference information is composed of an ID reference, an element name, and an element type. The ID reference specifies fragment data using an ID attached to the fragment data. The element name describes the XML element name of the highest node of the fragment data. The element type describes the element type name in the XML schema of the highest node of the fragment data.

[0096] Whether fragment data is required is determined based on the element type included in the reference information. Because the format of XML elements and attributes included in the structured data is defined using XML schemas and because the element type included in the reference information is the XML schema element type of the highest node of the fragment data to be referenced, the outline contents of the fragment data can be acquired from the element type by interpreting the format definition of the structured data defined by the XML schemas. The user or the application 36 determines whether the fragment data is required, based on the outline contents.

The cited paragraphs do not disclose an attribute type that can be "logical object" or "physical object". For at least this reason, the applicant submits that claim 17 is allowable and that the rejection should be withdrawn.

Claim 18. The Examiner rejected claim 18, stating that Azami discloses:

the sub-rules include a class rule that provides a class name to an object (page 5, paragraph [0068]).

The applicant respectfully disagrees. What the cited paragraph actually discloses is the following:

[0068] FIG. 5 is a diagram showing the structure of fragment configuration information in this embodiment. The fragment configuration information is composed of position information and reference information. The position information is composed of XPath and 'position'. They are used to specify a position at which the highest node of fragment data is to be positioned in the structured data that will be generated in the receiving side. The reference information is composed of an ID reference, an element name, and an element type. The ID reference specifies fragment data using an ID attached to the fragment data. The element name describes the XML element name of the highest node of the fragment data. The element type describes the element type name in the XML schema of the highest node of the fragment data.

The cited paragraph does not disclose a class rule that provides a class name to an object. For at least this reason, the applicant submits that claim 18 is allowable and that the rejection should be withdrawn.

Claim 19. The Examiner rejected claim 19, stating that Azami discloses:

> *encoding rules include internal entity encoding rules (page 5, paragraph [0068] and page 6, paragraph [0075]).*

The applicant respectfully disagrees. What the cited paragraphs actually disclose is the following:

> *[0068] FIG. 5 is a diagram showing the structure of fragment configuration information in this embodiment. The fragment configuration information is composed of position information and reference information. The position information is composed of XPath and 'position'. They are used to specify a position at which the highest node of fragment data is to be positioned in the structured data that will be generated in the receiving side. The reference information is composed of an ID reference, an element name, and an element type. The ID reference specifies fragment data using an ID attached to the fragment data. The element name describes the XML element name of the highest node of the fragment data. The element type describes the element type name in the XML schema of the highest node of the fragment data.*
>
> *[0075] Information included in the fragment configuration information in this embodiment may be converted to binary data using appropriate means to represent the information as binary data.*

The cited paragraphs do not disclose internal entity encoding rules. For at least this reason, the applicant submits that claim 19 is allowable and that the rejection should be withdrawn.

Claim 20. The Examiner rejected claim 20, stating that Azami discloses:

> *encoding rules include external name encoding rules (page 5, paragraph [0068] and page 6, paragraph [0075]).*

The applicant respectfully disagrees. What the cited paragraphs actually disclose is the following:

[0068] FIG. 5 is a diagram showing the structure of fragment configuration information in this embodiment. The fragment configuration information is composed of position information and reference information. The position information is composed of XPath and 'position'. They are used to specify a position at which the highest node of fragment data is to be positioned in the structured data that will be generated in the receiving side. The reference information is composed of an ID reference, an element name, and an element type. The ID reference specifies fragment data using an ID attached to the fragment data. The element name describes the XML element name of the highest node of the fragment data. The element type describes the element type name in the XML schema of the highest node of the fragment data.

[0075] Information included in the fragment configuration information in this embodiment may be converted to binary data using appropriate means to represent the information as binary data.

The cited paragraphs do not disclose external name encoding rules. For at least this reason, the applicant submits that claim 20 is allowable and that the rejection should be withdrawn.

Claim 21. The Examiner rejected claim 21, stating that Azami discloses:

encoding rules include unparsed object encoding rules (page 5, paragraph [0068] and page 6, paragraph [0075]).

The applicant respectfully disagrees. What the cited paragraphs actually disclose is the following:

[0068] FIG. 5 is a diagram showing the structure of fragment configuration information in this embodiment. The fragment configuration information is composed of position information and reference information. The position information is composed of XPath and 'position'. They are used to specify a position at which the highest node of fragment data is to be positioned in the structured data that will be generated in the receiving side. The reference information is composed of an ID reference, an element name, and an element type. The ID reference specifies fragment data using an ID attached to the fragment data. The element name describes the XML element name of the highest node of the fragment data. The element type describes the element type name in the XML schema of the highest node of the fragment data.

[0075] Information included in the fragment configuration information in this embodiment may be converted to binary data using appropriate means to represent the information as binary data.

The cited paragraphs do not disclose unparsed object encoding rules. For at least this reason, the applicant submits that claim 21 is allowable and that the rejection should be withdrawn.

Claim 22. The Examiner rejected claim 22, stating that Azami discloses:

encoding rules include hyperlink encoding rules (pages 8-9, paragraph [0115]).

The applicant respectfully disagrees. What the cited paragraphs actually disclose is the following:

[0115] In response to the URI of content data and an acquisition request for the content data corresponding to the URI from a user or an application 36a, a data reception unit 38 requests the database 5a, via the Internet 7, to transmit the content data corresponding to the URI. The data reception unit 38 receives the content data corresponding to the URI transmitted from the database 5a and outputs the received content data to the user or the application 36a. In response to an acquisition request for a fragment configuration information stream, or to a URI and an acquisition request for the fragment data corresponding to the URI, from a metadata concatenation unit 34b, the data reception unit 38 requests the database 5a, via the Internet 7, to transmit the fragment configuration information stream or the fragment data corresponding to the URI, receives the fragment configuration information stream or the fragment data corresponding to the URI transmitted from the database 5a, and outputs the received fragment configuration information stream or the fragment data corresponding to the URI to the metadata concatenation unit 34b.

The cited paragraph discloses requesting content data corresponding to a URI. The paragraph does not, however, disclose hyperlink encoding rules. For at least this reason, the applicant submits that claim 22 is allowable and that the rejection should be withdrawn.

Conclusion

For the foregoing reasons, the applicant submits that all the claims are in condition for allowance.

By responding in the foregoing remarks only to particular positions taken by the examiner, the applicant does not acquiesce in other positions that have not been explicitly addressed. In addition, the applicant's arguments for the patentability of a claim should not be understood as implying that no other reasons for the patentability of that claim exist.

Please apply the fee for a one-month extension of time and any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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